General Physics

NEW LIGHT DISTRIBUTION REFLECTED OFF RANDOM MEDIA*

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The propagation of a light pulse in a heterogeneous medium [1] can be modeled by assuming that the laser photons perform random walk type motion. We have developed a Monte-Carlo algorithm [2] to simulate a laser pulse in a time-dependent turbid medium such as milk. The computer simulations are designed to get a better understanding of how spatial in-homogeneities that are embedded inside the milk modify the propagation dynamics and how they can be detected.

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[1] For related work see http://omlc.ogi.edu/software/mc/index.html
[2] M.S. Bell, A.F. Lewis, R.E. Wagner, Q. Su and R. Grobe, Laser Phys. (in press).